UNITED STATES NAVAL OBSERVATORY

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POSITIONS, AREAS, AND COUNTS OF SUNSPOTS
SEPTEMBER, 1950

By Lucy T. Day

These results are based upon measurements made at the Naval Observatory on plates secured either there or at the Mt. Wilson Observatory. The symbols used for the entries in the successive columns are as follows:

U.T., the epoch of observation in Universal Time.
No., the identifying number of the group assigned by Mt. Wilson.
Δl, the heliographic difference in longitude from the central meridian, measured positive to the west.
φ, the heliographic latitude, measured positive to the north.
ρ, the heliocentric angular distance from the line joining the centers of the Earth and Sun.
A, the true area of the umbra plus penumbra, expressed in millionths of the visible hemisphere.
s, the number of spots.

An asterisk means that no Mt. Wilson number was assigned. Plates secured at the Naval Observatory are indicated by N, and those at Mt. Wilson by W. The plate quality, which follows, is indicated by:

1, Poor; 2, Fair; 3, Good; 4, Very Good; 5, Excellent.

The following five quantities are listed successively at the end of each day, and give for that day:

1. The total number of groups, g.
2. The longitude of the central meridian, L_0.
3. The latitude of the center of the disc, B_0.
4. The total value of A.
5. The total value of s.

The mean daily area and the mean relative sunspot number, $r=10g+s$ are given at the end of the month.

These results are a continuation of those published in the *Monthly Weather Review* from February 1, 1927 to December 31, 1947.

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U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
1.647	10459	−33	+15	34	73	5
N–2	10459	−30	+14	31	24	8
	10459	−24	+13	25	194	1
	10460	−27	−23	40	48	4
	10456	+29	− 6	32	36	1
	10461	+38	+13	38	61	1
	10461	+40	+12	40	24	9
	10461	+46	+13	46	61	3
	10461	+49	+13	49	12	2
	(4)	(227)	(+7)		533	34
2.725	10459	−19	+15	21	24	8
N–3	10459	−14	+14	15	12	5
	10459	− 9	+13	12	194	1
	10460	−14	−23	34	16	1
	10461	+51	+12	51	36	3
	10461	+53	+12	53	36	4
	10461	+57	+11	57	12	1
	10461	+61	+11	61	97	3
	(3)	(213)	(+7)		427	26
3.654	10468	−42	−16	47	12	1
N–2	10467	−20	+11	21	6	2
	10460	0	−22	29	12	1
	10459	+ 4	+13	7	170	1
	10459	+ 5	+14	8	6	1
	10465	+37	+14	38	12	2
	10464	+49	+20	49	12	3
	10461	+63	+12	63	24	2
	10461	+72	+12	72	194	6
	(7)	(201)	(+7)		448	19
4.684	10468	−28	−16	36	12	1
N–2	(*)	+ 7	+16	12	16	7
	10459	+12	+13	14	24	8
	10459	+18	+13	20	170	1
	10466	+45	−19	52	36	2
	10466	+49	−19	54	24	2
	(4)	(187)	(+7)		282	21
5.652	(*)	−68	+13	68	12	1
N–4	10459	+32	+14	33	145	1
	10466	+60	−19	64	12	2
	(3)	(174)	(+7)		169	4
6.658	10470	−80	− 3	80	97	1
N–3	10459	+45	+13	45	145	1
	(2)	(161)	(+7)		242	2
7.663	10470	−71	− 4	71	48	1
N–2	10470	−67	− 3	68	48	1
	10470	−63	− 4	64	97	1
	10459	+59	+13	59	121	1
	(2)	(148)	(+7)		314	4

U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
8.656	10470	−56	− 4	57	85	3
N–2	10470	−52	− 4	53	48	1
	10470	−50	− 4	52	73	1
	10472	−30	+12	30	12	1
	10472	−27	+11	28	6	1
	10459	+72	+13	72	121	1
	(3)	(135)	(+7)		345	8
9.621	10473	−68	+19	68	24	6
W–3	10474	−67	+22	68	12	1
	10470	−45	− 4	47	24	11
	10470	−39	− 4	41	48	10
	10470	−37	− 4	40	36	3
	10471	+17	+16	20	12	4
	10471	+18	+15	20	16	2
	10459	+85	+13	85	97	1
	(5)	(122)	(+7)		269	38
10.645	10470	−28	− 4	32	24	4
N–2	10470	−25	− 4	28	61	5
	10470	−22	− 4	24	36	1
	(1)	(108)	(+7)		121	10
11.658	10476	−80	−11	80	194	1
N–2	10470	−14	− 4	18	24	4
	10470	−11	− 4	15	48	3
	10470	− 9	− 4	14	48	1
	10470	− 7	− 4	13	12	1
	10475	+41	+21	42	24	2
	(3)	(95)	(+7)		350	12
12.590	10476	−67	−11	68	194	1
W–4	10470	− 4	− 4	12	12	4
	10470	− 2	− 4	11	48	18
	10470	+ 3	− 3	10	48	8
	10470	+ 4	− 5	13	73	2
	10475	+53	+23	55	12	8
	10475	+56	+21	57	48	4
	(3)	(83)	(+7)		435	45
13.614	10477	−67	+13	67	73	6
W–4	10477	−65	+15	65	61	6
	10476	−53	−10	56	194	1
	10470	+15	− 5	19	194	32
	10470	+18	− 5	23	97	5
	10475	+67	+22	68	97	18
	10475	+71	+20	71	24	7
	10475	+71	+18	71	242	2
	(4)	(69)	(+7)		982	77
14.751	10479	−57	−13	61	12	1
N–2	10479	−53	−12	57	12	1
	10477	−53	+13	53	194	3
	10477	−48	+14	48	194	3
	10476	−41	−12	45	6	1

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U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
	10476	−40	− 8	43	12	1
	10476	−38	−10	42	145	2
	10470	+28	− 5	32	24	6
	10470	+33	− 4	35	170	5
	10478	+50	+13	50	12	3
	10475	+80	+20	80	218	1
	10475	+87	+18	87	242	1
	(6)	(54)	(+7)		1241	28
15.641	10481	−78	+17	78	242	1
N–2	10477	−41	+13	41	194	9
	10477	−36	+13	36	218	5
	10476	−28	−12	34	12	3
	10476	−27	− 8	32	6	1
	10476	−26	−11	32	109	4
	10480	+35	+13	37	12	1
	10470	+39	− 7	42	12	2
	10470	+40	− 5	43	24	3
	10470	+45	− 5	47	145	3
	(5)	(42)	(+7)		974	32
16.638	10481	−64	+17	64	291	1
N–2	10477	−29	+14	30	109	8
	10477	−24	+14	25	36	2
	10477	−22	+13	23	218	4
	10479	−26	−13	33	12	2
	10476	−13	−11	23	6	1
	10476	−12	−11	22	121	1
	10476	−12	− 8	20	16	8
	10480	+49	+12	49	48	10
	10470	+54	− 5	55	48	4
	10470	+60	− 4	62	121	5
	(6)	(29)	(+7)		1026	46
17.655	10481	−51	+17	51	291	1
N–2	10477	−16	+14	17	121	6
	10477	− 9	+12	11	170	3
	10476	+ 1	−10	17	97	1
	10480	+60	+12	60	109	5
	10470	+68	− 6	69	48	1
	10470	+73	− 4	73	97	2
	(5)	(16)	(+7)		933	19
18.643	10481	−37	+17	38	291	1
N–2	10477	− 3	+13	7	121	8
	10477	+ 3	+12	5	194	2
	10479	− 2	−13	20	36	2
	10479	+ 2	−13	20	24	3
	10482	+11	+12	12	48	4
	10476	+13	−11	22	121	1
	10476	+16	−14	26	145	8
	10480	+73	+12	73	97	1
	(6)	(3)	(+7)		1077	30

U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
19.636	10481	−29	+17	30	36	2
N–2	10481	−29	+16	30	24	1
	10481	−24	+17	25	364	1
	10477	+10	+12	12	97	8
	10477	+17	+12	18	194	2
	10479	+11	−16	25	12	2
	10479	+17	−13	27	24	1
	10482	+25	+13	26	24	2
	10476	+26	−12	32	73	1
	10476	+27	−16	34	24	2
	10476	+29	−14	35	121	7
	10483	+66	+ 1	66	12	4
	(6)	(350)	(+7)		1005	33
20.603	10481	−15	+16	17	48	4
W–2	10481	−11	+18	17	339	1
	10477	+23	+12	24	48	2
	10477	+27	+13	28	48	12
	10477	+30	+13	31	145	1
	10479	+25	−16	33	6	1
	10479	+32	−12	37	16	2
	10476	+40	−10	43	73	1
	10476	+43	−14	47	73	6
	10483	+78	+ 2	78	97	7
	10483	+81	+ 1	81	97	5
	(5)	(337)	(+7)		990	42
21.601	10484	−75	+15	75	121	3
W–3	10481	− 1	+16	9	24	3
	10481	+ 2	+18	12	291	1
	10477	+37	+12	37	36	2
	10477	+41	+14	41	12	1
	10477	+43	+14	43	145	3
	10479	+37	−16	43	12	1
	10479	+46	−13	49	16	1
	10476	+52	−10	54	48	1
	(5)	(324)	(+7)		705	16
22.589	10484	−67	+15	67	73	9
W–3	10484	−62	+14	62	97	20
	10481	−17	+18	21	291	1
	10477	+49	+13	49	36	5
	10477	+57	+14	57	145	2
	10479	+53	−15	57	16	1
	10479	+56	−13	59	12	4
	10479	+61	−12	64	12	1
	10476	+67	−12	70	36	1
	(6)	(311)	(+7)		718	44
23.651	10484	−54	+15	54	48	13
W–3	10484	−47	+14	47	73	5
	10481	+30	+18	32	242	1
	10477	+64	+13	64	24	1
	10477	+71	+14	71	97	1
	10476	+80	−12	80	48	1
	(4)	(297)	(+7)		532	22

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U.T.	No.	Δl	φ	ρ	A	s
		°	°	°		
24.612	10484	−39	+14	39	48	10
W−2	10484	−36	+14	36	24	2
	10484	−33	+13	34	73	1
	10485	+27	+16	29	48	11
	10481	+44	+18	45	242	1
	(3)	(284)	(+7)		435	25
25.615	10484	−27	+15	28	48	8
W−3	10484	−21	+14	22	97	5
	10485	+40	+16	40	36	7
	10485	+43	+15	43	48	5
	10481	+57	+18	57	255	1
	(3)	(271)	(+7)		484	26
26.665	10484	−12	+15	15	48	16
W−2	10484	− 7	+14	11	97	4
	10485	+54	+16	54	36	6
	10485	+58	+15	58	61	1
	10481	+70	+18	70	267	1
	(3)	(257)	(+7)		509	28
27.609	10488	−48	−21	54	12	3
W−3	10484	0	+14	7	36	12
	10484	+ 3	+15	8	24	10
	10484	+ 6	+14	10	97	2
	10485	+67	+16	67	36	5
	10485	+70	+14	70	12	7
	10485	+75	+15	75	6	2
	10481	+84	+18	84	267	1
	(4)	(244)	(+7)		490	39
28.606	10488	−38	−21	37	48	6
W−3	10488	−35	−20	45	36	7
	10484	+14	+15	16	61	20
	10484	+20	+16	22	24	8
	10484	+20	+14	21	61	1
	(*)	+73	− 5	73	12	3
	10485	+83	+15	83	24	6
	(4)	(231)	(+7)		266	51
29.672	10491	−83	+22	83	291	1
N−3	10490	−75	− 7	76	73	1
	10490	−69	− 6	69	97	1
	10488	−26	−23	40	48	1
	10488	−21	−21	36	24	1
	10484	+27	+15	28	12	4
	10484	+33	+14	34	48	1
	(4)	(217)	(+7)		593	10
30.706	10492	−85	+12	85	48	1
N−2	10491	−70	+22	70	242	1
	10490	−60	− 7	62	73	3
	10490	−57	− 7	59	36	2
	10490	−54	− 8	57	97	1
	10484	+47	+14	47	12	1
	10484	+57	+13	57	12	1
	(4)	(203)	(+7)		520	10

Mean for 30 days, $A = 580$, $r = 67.7$

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